

PATENT
Attorney Docket No.: SONY-14700

Amendments to the Drawings:

The attached sheets of drawings include changes to Figures 2b, 4a, 4b, 4c and 5. The replacement sheets replace the original sheets including Figures 2b, 4a, 4b, 4c and 5. In Figure 2b, the element 20' has been correctly labeled. In Figures 4a, 4b, 4c and 5, the figures have been amended to include the designation "PRIOR ART."

REMARKS

Applicant respectfully requests further examination and reconsideration in view of the comments set forth fully below. Claims 1-42 were pending. Within the Office Action, Claims 1-42 have been rejected. By the above amendment, Claims 6, 21, 25, 31 and 40 have been amended. Accordingly, Claims 1-42 are now pending.

Objections To The Drawings:

Within the Office Action, the drawings have been objected to. Specifically, it is stated within the Office Action that in Figure 2b, part 20 should be labeled 20'. By the above amendment, Figure 2b has been amended to correctly label the element 20'. It is further stated within the Office Action that Figure 5 should be designated "PRIOR ART." By the above amendment, Figures 4a, 4b, 4c and 5 have been amended to include the designation "PRIOR ART."

Objections To The Specification:

Within the Office Action, the disclosure is objected to because on page 4, line 22, the phrase "DVI Interface" should be replaced with "TMDS links." The applicant thanks the Examiner for his thorough reading of the specification. By the above amendment, page 4, line 22 has been amended per the Examiner's suggestion.

Objections To The Claims:

Within the Office Action, Claims 6, 21, 25, 31 and 40 have been objected to because the word "substantially" should be removed. By the above amendment, Claims 6, 21, 25, 31 and 40 have been amended to remove the word "substantially."

Rejections Under 35 U.S.C. § 103:

Within the Office Action, Claims 1-4, 6-9, 11-17, 19-26, 28-31, 33-36 and 38-41 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,624,797 to Wheeler et al. ("Wheeler") in view of U.S. Patent No. 6,356,968 to Kishon ("Kishon"). The applicants respectfully disagree. Wheeler teaches a method and apparatus for providing video

and control to a monitor. Wheeler teaches combining a USB signal on a standard video cable. As recognized within the Office Action, Wheeler does not teach a DVI cable wherein IEEE 1394 signals are transferred over the DVI cable.

Kishon teaches an apparatus and method for transparent USB-to-1394 bridging and video delivery between a host computer system and a remote peripheral device. Kishon teaches that USB data packets are reformatted for transmission over an IEEE 1394 bus. Kishon also does not teach a DVI cable wherein IEEE 1394 signals are transferred over the DVI cable. Accordingly, neither Wheeler, Kishon nor their combination teach a DVI cable wherein IEEE 1394 signals are transferred over the DVI cable.

Within the Office Action, it is stated that it would have been obvious to combine the teachings of Wheeler with the teachings of Kishon. The applicants respectfully disagree.

This is a classic case of impermissibly using hindsight to make a rejection based on obviousness. The Court of Appeals for the Federal Circuit has stated that “it is impermissible to use the claimed invention as an instruction manual or ‘template’ to piece together the teachings of the prior art so that the claimed invention is rendered obvious.” In Re Fritch, 972 F.2d, 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992). There is no hint, teaching or suggestion to combine the teachings of Wheeler with the teachings of Kishon. It is simply not permissible to conclude that this is an obvious combination without a hint, teaching or suggestion to warrant the combination, based on the directive from the Court of Appeals for the Federal Circuit.

It is well settled that to establish a *prima facie* case of obviousness, three basic criteria must be met:

- 1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings;
- 2) there must be a reasonable expectation of success; and
- 3) the prior art reference, or references, must teach or suggest all the claim limitations. MPEP § 2143.

The burden of establishing a *prima facie* case of obviousness based on the teachings of Wheeler and Kishon has not been met within the Office Action. There is no motivation to combine the teachings of Wheeler with Kishon.

As discussed above, Wheeler teaches a method and apparatus for providing video and control to a monitor. Wheeler teaches combining a USB signal on a standard video cable. Kishon teaches an apparatus and method for transparent USB-to-1394 bridging and video delivery between a host computer system and a remote peripheral device. Kishon teaches that USB data packets are reformatted for transmission over an IEEE 1394 bus. Despite the assertions within the Office Action, it would not have been obvious to combine the teachings of Kishon with Wheeler. Kishon teaches that USB data packets are reformatted for transmission over an IEEE 1394 bus. However, Wheeler is eliminating the USB cable by combining a USB signal on a standard video cable.

In addition to the combination of Wheeler and Kishon being improper based on impermissible hindsight, the combination is also improper since the references teach away from each other. Within MPEP §2145, “it is improper to combine references where the references teach away from their combination.” *In re Grasselli*, 713 F.2d 731, 743 (Fed. Cir. 1983) As described above, it is improper to combine Kishon, which teaches that USB data packets are reformatted for transmission over an IEEE 1394 bus with Wheeler, which is eliminating the USB cable by combining a USB signal on a standard video cable.

Even if considered proper, the combination of Wheeler and Kishon does not teach the present invention as claimed. In contrast to the teachings of Wheeler, Kishon and their combination, the cable and connection with integrated DVI and IEEE 1394-2000 capabilities is utilized to transmit DVI signals and IEEE 1394-2000 signals over a single cable. A standard DVI cable and a DVI connector are used to integrate a DVI interface with an IEEE 1394-2000 interface. Preferably, DVI data is transmitted over the first TMDS link, including channels 0-2, and IEEE 1394-2000 data is transmitted over two twisted pairs within the second TMDS link, including channels 3-5. As described above, neither Wheeler, Kishon nor their combination teach a DVI cable wherein IEEE 1394 signals are transferred over the DVI cable.

The independent Claim 1 is directed to a DVI connector for receiving and transmitting DVI signals and IEEE 1394 signals over a DVI cable. The DVI connector of Claim 1 comprises means for receiving and transmitting the DVI signals configured for coupling to the DVI cable for transmitting and receiving the DVI signals and means for receiving and transmitting the IEEE 1394 signals configured for coupling to the DVI cable for transmitting and receiving the IEEE 1394 signals. As discussed above, the combination of Wheeler and Kishon is improper. As further discussed above, neither Wheeler, Kishon nor their combination teach a DVI connector for receiving and transmitting DVI signals and IEEE 1394 signals over a DVI cable. For at least

these reasons, the independent Claim 1 is allowable over the teachings of Wheeler, Kishon and their combination.

Claims 2-4, 6-9 and 11-13 are all dependent upon the independent Claim 1. As discussed above, the independent Claim 1 is allowable over the teachings of Wheeler, Kishon and their combination. Accordingly, Claims 2-4, 6-9 and 11-13 are all also allowable as being dependent upon the independent Claim 1.

The independent Claim 14 is directed to a DVI connector configured to receive and transmit DVI signals and IEEE 1394 signals over a DVI cable. The DVI connector of Claim 14 comprises a first plurality of pins configured to couple to the DVI cable to transmit and receive the DVI signals and a second plurality of pins configured to couple to the DVI cable to transmit and receive the IEEE 1394 signals. As discussed above, the combination of Wheeler and Kishon is improper. As further discussed above, neither Wheeler, Kishon nor their combination teach a DVI connector for receiving and transmitting DVI signals and IEEE 1394 signals over a DVI cable. For at least these reasons, the independent Claim 14 is allowable over the teachings of Wheeler, Kishon and their combination.

Claims 15-17 and 19-22 are all dependent upon the independent Claim 14. As discussed above, the independent Claim 14 is allowable over the teachings of Wheeler, Kishon and their combination. Accordingly, Claims 15-17 and 19-22 are all also allowable as being dependent upon the independent Claim 14.

The independent Claim 23 is directed to a DVI connector for receiving and transmitting IEEE 1394 signals over a DVI cable comprising a plurality of pins configured for coupling to the DVI cable for transmitting and receiving the IEEE 1394 signals, wherein the plurality of pins are further configured for coupling to an IEEE 1394 interface circuit. As discussed above, the combination of Wheeler and Kishon is improper. As further discussed above, neither Wheeler, Kishon nor their combination teach a DVI connector for receiving and transmitting IEEE 1394 signals over a DVI cable. For at least these reasons, the independent Claim 23 is allowable over the teachings of Wheeler, Kishon and their combination.

Claims 24-26 are all dependent upon the independent Claim 23. As discussed above, the independent Claim 23 is allowable over the teachings of Wheeler, Kishon and their combination. Accordingly, Claims 24-26 are all also allowable as being dependent upon the independent Claim 23.

The independent Claim 28 is directed to a method of receiving and transmitting DVI signals and IEEE 1394 signals over a DVI cable. The method of Claim 28 comprises communicating the DVI signals over the DVI cable and communicating the IEEE 1394 signals over the DVI cable. As discussed above, the combination of Wheeler and Kishon is improper. As further discussed above, neither Wheeler, Kishon nor their combination teach a DVI cable for receiving and transmitting DVI signals and IEEE 1394 signals over a DVI cable. For at least these reasons, the independent Claim 28 is allowable over the teachings of Wheeler, Kishon and their combination.

Claims 29-31 are all dependent upon the independent Claim 28. As discussed above, the independent Claim 28 is allowable over the teachings of Wheeler, Kishon and their combination. Accordingly, Claims 29-31 are all also allowable as being dependent upon the independent Claim 28.

The independent Claim 33 is directed to a communication device for transmitting and receiving signals with other devices including a DVI connector for receiving and transmitting DVI signals and IEEE 1394 signals over a DVI cable. The DVI connector of Claim 33 comprises a first plurality of pins configured for coupling to the DVI cable for transmitting and receiving the DVI signals and a second plurality of pins configured for coupling to the DVI cable for transmitting and receiving the IEEE 1394 signals. As discussed above, the combination of Wheeler and Kishon is improper. As further discussed above, neither Wheeler, Kishon nor their combination teach a DVI connector for receiving and transmitting DVI signals and IEEE 1394 signals over a DVI cable. For at least these reasons, the independent Claim 33 is allowable over the teachings of Wheeler, Kishon and their combination.

Claims 34-36 and 38-40 are all dependent upon the independent Claim 33. As discussed above, the independent Claim 33 is allowable over the teachings of Wheeler, Kishon and their combination. Accordingly, Claims 34-36 and 38-40 are all also allowable as being dependent upon the independent Claim 33.

The independent Claim 41 is directed to a network of devices comprising a DVI cable including digital signal lines with a first plurality of the digital signal lines corresponding to a first link and a second plurality of the digital signal lines corresponding to a second link, a source device and a receiving device. The source device includes a DVI transmitter circuit configured for transmitting DVI signals, a first IEEE 1394 interface circuit for communicating IEEE 1394 signals and a first DVI connector coupled to the DVI cable for transmitting the DVI signals and transmitting and receiving the IEEE 1394 signals, the first DVI connector including a first

plurality of digital pins coupled to the first plurality of digital signal lines of the DVI cable and to the DVI transmitter circuit for transmitting the DVI signals and a second plurality of digital pins coupled to the second plurality of digital signal lines of the DVI cable and to the first IEEE 1394 interface circuit for transmitting and receiving the IEEE 1394 signals. The receiving device includes a DVI receiver circuit configured for receiving the DVI signals, a second IEEE 1394 interface circuit for communicating the IEEE 1394 signals and a second DVI connector coupled to the DVI cable for receiving DVI signals and transmitting and receiving the IEEE 1394 signals, the second DVI connector including a third plurality of digital pins coupled to the first plurality of digital signal lines of the DVI cable and to the DVI receiver circuit for receiving the DVI signals and a fourth plurality of digital pins coupled to the second plurality of digital signal lines of the DVI cable and to the second IEEE 1394 interface circuit for transmitting and receiving the IEEE 1394 signals. As discussed above, the combination of Wheeler and Kishon is improper. As further discussed above, neither Wheeler, Kishon nor their combination teach a DVI connector for receiving and transmitting DVI signals and IEEE 1394 signals over a DVI cable. For at least these reasons, the independent Claim 41 is allowable over the teachings of Wheeler, Kishon and their combination.

Within the Office Action, Claims 5 and 27 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Wheeler, Kishon and further in view of Matrox G200 Flat Panel Add-On User Guide. Claim 5 is dependent on the independent Claim 1. Claim 27 is dependent on the independent Claim 23. As discussed above, the independent Claims 1 and 23 are both allowable over the teachings of Wheeler, Kishon and their combination. Accordingly, Claims 5 and 27 are both also allowable as being dependent on an allowable base claim.

Within the Office Action, Claims 10, 18, 32, 37 and 42 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Wheeler, Kishon and further in view of U.S. Patent No. 5,323,272 to Klinger. Claim 10 is dependent on the independent Claim 1. Claim 18 is dependent on the independent Claim 14. Claim 32 is dependent on the independent Claim 28. Claim 37 is dependent on the independent Claim 33. Claim 42 is dependent on the independent Claim 41. As discussed above, the independent Claims 1, 14, 28, 33 and 41 are all allowable over the teachings of Wheeler, Kishon and their combination. Accordingly, Claims 10, 18, 32, 37 and 42 are all also allowable as being dependent on an allowable base claim.

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Applicants respectfully submit that the claims are in a condition for allowance, and allowance at an early date would be appreciated. Should the Examiner have any questions or comments, they are encouraged to call the undersigned at (408) 530-9700 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,
HAVERSTOCK & OWENS LLP

Dated: February 16, 2006

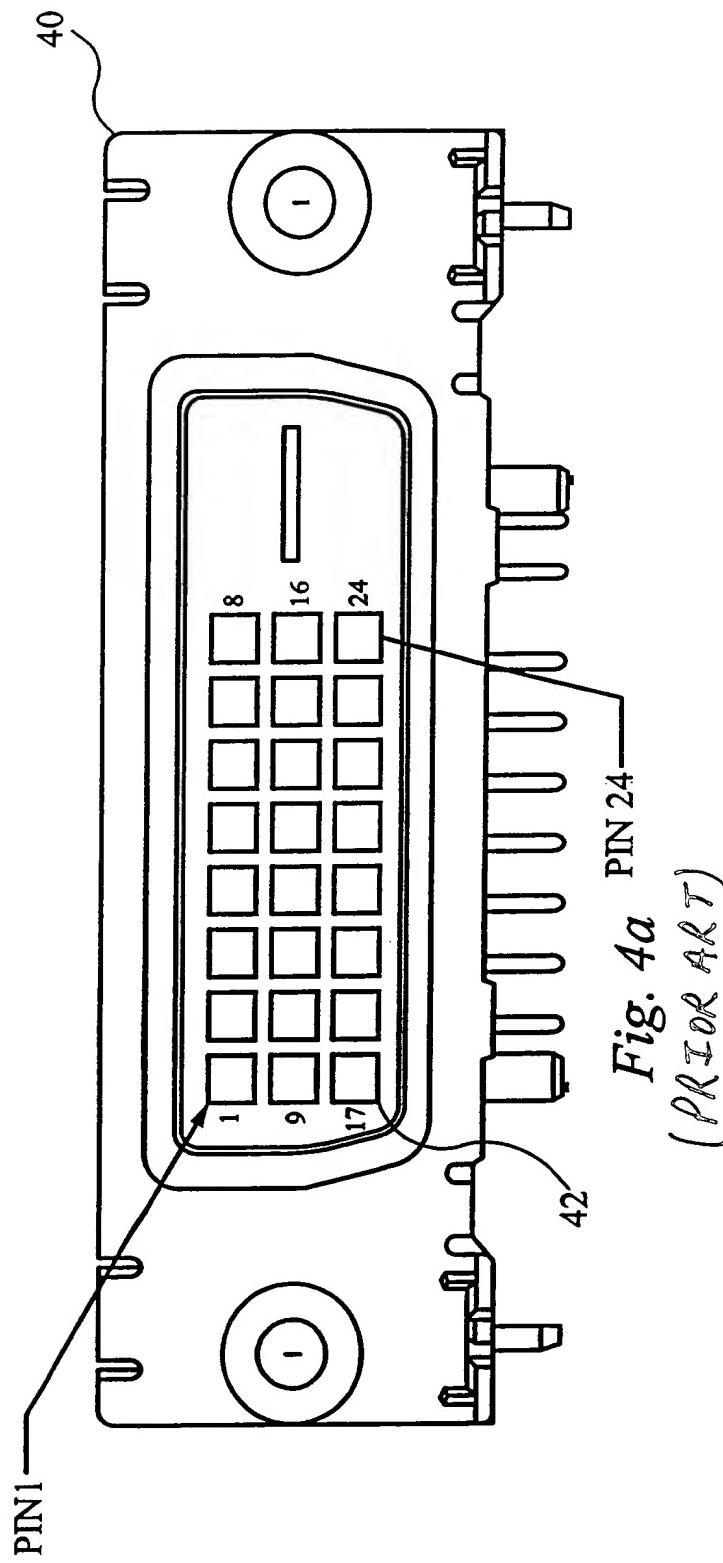
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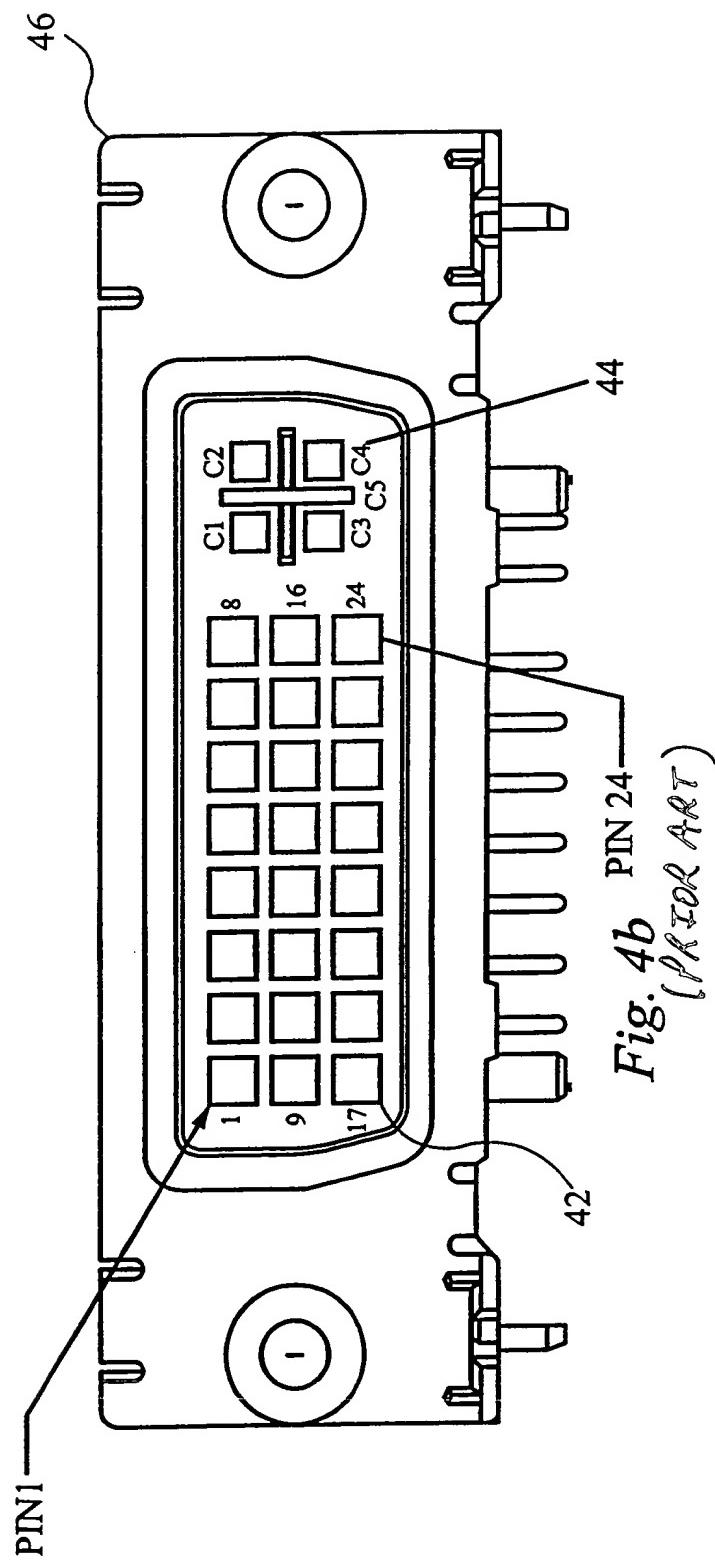


Fig. 4b
(*PRIOR ART*)

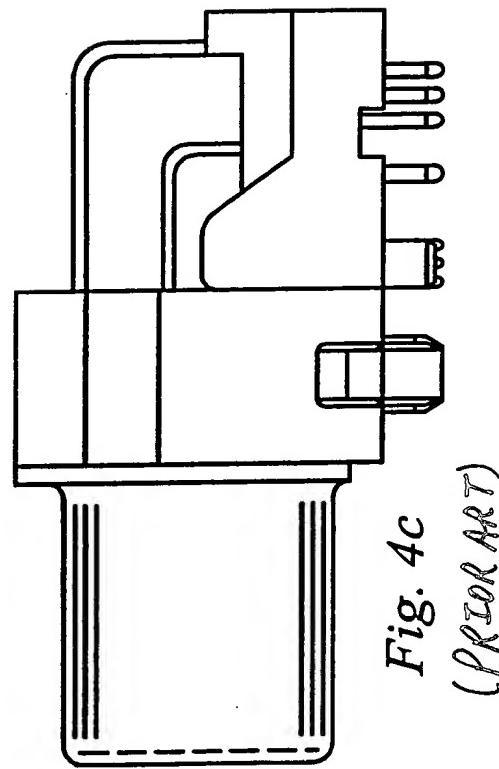


Fig. 4c
(*PRIOR ART*)

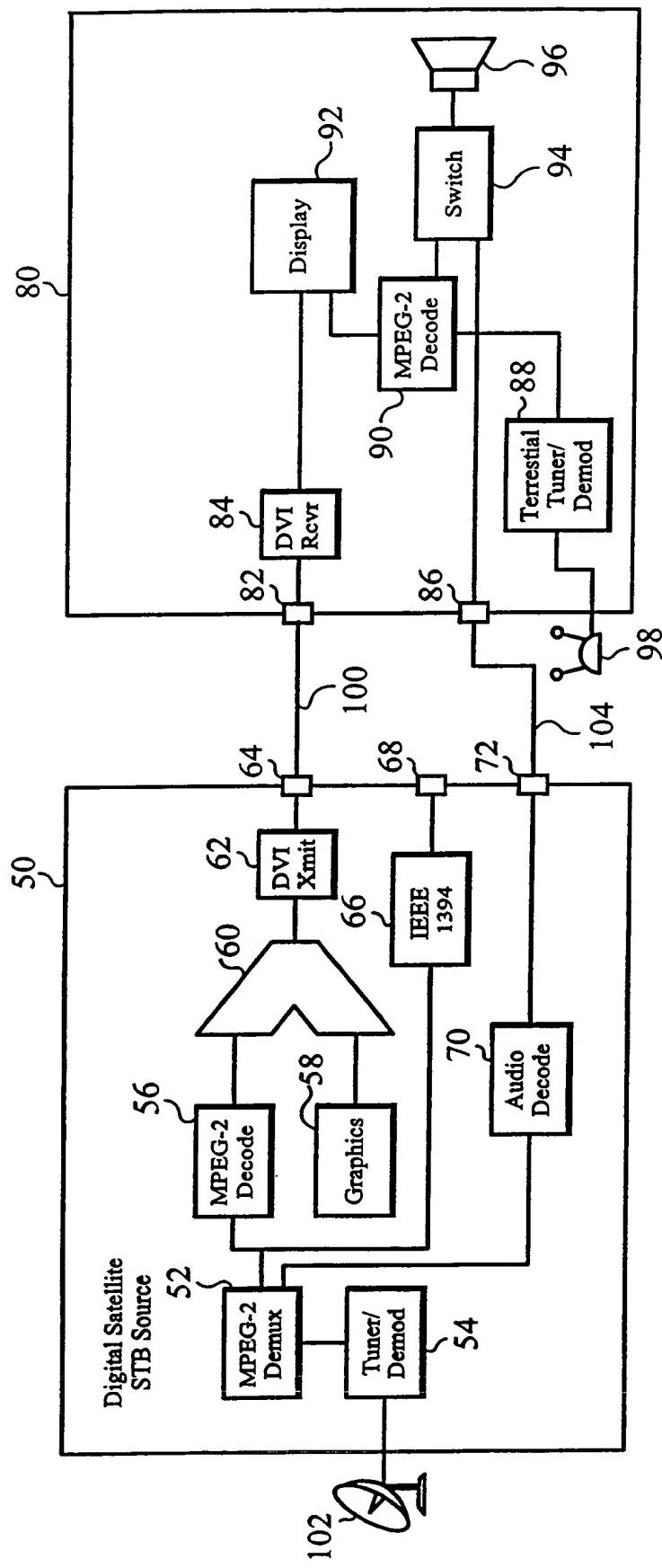


Fig. 5 (PVR ART)